

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 31

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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**MAILED**

**JUN 11 1998**

**Ex parte JAMES E. TROUNSON**

**PAT.&T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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**Appeal No. 95-2784  
Application 08/193,634<sup>1</sup>**

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**ON BRIEF**

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**Before KRASS, BARRETT and FLEMING, Administrative Patent Judges.  
FLEMING, Administrative Patent Judge.**

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<sup>1</sup> Application for patent filed February 8, 1994. According to appellant, the application is a continuation of Application 07/655,857, filed February 15, 1991, abandoned.

### DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 3, 18 and 19. Claims 4 and 7 through 10 have been allowed. Claims 5, 6, 11 through 17 and 20 through 23 have been canceled.

The invention is directed to a servo control system for machine tools which cut or form pieces of material, such as metal or wood, into desired geometric shapes.

The independent claim 1 is reproduced as follows:

1. A system for controlling the formation of geometric shapes in materials by moving a tool relative to a workpiece along multiple axes of movement, comprising:

means defining data representative of geometric shapes to be cut or otherwise formed in materials;

means for converting said data into a description of a path to be followed by the tool and storing said description;

a plurality of motors respectively associated with said multiple axes, each of said motors providing relative movement between the tool and the workpiece along an associated one of said axes;

a plurality of feedback devices respectively associated with said plurality of motors for providing feedback information indicative of at least one of the actual position and velocity of the tool along an associated axis; and

a single active processor for controlling said data defining means and said data converting means, for receiving feedback information from each of said feedback devices, and for controlling the operation of each of said motors to provide

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coordinated relative movement between the tool and the workpiece along each of said multiple axes in accordance with said stored path description.

The Examiner relies on the following references:

Daggett et al. (Daggett)	4,786,847	Nov. 22, 1988
Hyatt	4,827,419	May 9, 1989

Claims 1 through 3, 18 and 19 stand rejected under 35 U.S.C. § 102 as being anticipated by Hyatt. Claims 1 through 3, 18 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Daggett in view of Hyatt.

Rather than reiterate the arguments of Appellant and the Examiner, reference is made to the briefs<sup>2</sup> and answer for the respective details thereof.

#### OPINION

We will not sustain the rejection of claims 1 through 3, 18 and 19 under 35 U.S.C. §§ 102 or 103.

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<sup>2</sup> Appellant filed an appeal brief on November 21, 1994. We will refer to this appeal brief as simply the brief. Appellant filed a reply appeal brief on March 6, 1995. We will refer to this reply appeal brief as the reply brief. The Examiner stated in the Examiner's letter mailed March 17, 1995 that the reply brief has been entered and considered but no further response by the Examiner is deemed necessary.

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. See *In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984). "Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention." *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.), cert. dismissed, 468 U.S. 1228 (1984), citing *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

On pages 4-6 of the brief, Appellant argues that Hyatt fails to disclose the use of a single active processor for controlling each of the functions recited in Appellant's claim 1 and thereby does not anticipate Appellant's claims 1 through 3, 18 and 19. In particular, Appellant points out that Hyatt teaches a data processor 12 that only performs a portion of the overall control of the movement along each of the three axes. Appellant further points out that Hyatt teaches in Figure 3 an additional processor which performs the function of receiving

feedback information and controlling the operation of one of the motors.

We note that Appellant's claim 1 recites "a single active processor for controlling said data defining means and said data converting means, for receiving feedback information from each of said feedback devices, and for controlling the operation of each of said motors to provide coordinated relative movement between the tool and the workpiece along each of said multiple axes in accordance with said stored path description." Furthermore, we note that Appellant discloses on page 3 of the specification that his invention is to automate manual machine tools in a manner which adapts them to be reliable and economical when used for small quantity part production. Appellant discloses that in order to provide such an automated machine tool, the invention integrates into a single active processor all tasks which were heretofore carried out in a distributed manner. On page 5 of the specification, Appellant discloses that this is accomplished by having the single active processor shared among the many different tasks by a technique of real time multi-tasking. On page 7, Appellant discloses that the single active processor is a personal computer which receives feedback information, processes it and carries out the operations necessary to

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complete a feedback loop. Appellant states that "in the present invention the [single active] processor 12 does everything from closing all low level servo control loops to the highest level user interface functions.

The Examiner argues on page 4 of the answer that the Hyatt circuit shown in Figure 3 is not a processor because Figure 3 does not show a central processing unit, CPU. In the reply brief, Appellant argues that while it is recognized that the term "processor" is often used in reference to a device having a central processing unit, nevertheless, the term "processor" in its broadest context does not mean that a given processor must have a central processing unit. Appellant has further buttressed this argument in the brief on page 5. Appellant argues that the term "active processor" found in Appellant's claim 1 must be interpreted as defined in the specification. Appellant points to page 7, lines 16-20, of the specification which defines an active processor as a device which receives feedback information, processes it and carries out the operation necessary to complete a feedback loop.

When interpreting a claim, words of the claim are generally given their ordinary and accustomed meaning, unless it appears from the specification or the file history that they were

used differently by the inventor. **Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.**, 15 F.3d 1573, 1577, 27 USPQ2d 1836, 1840 (Fed. Cir. 1993). In view of the definition of Appellant's claimed term "active processor" and the claim language recited in claim 1, we find that Appellant's claims set forth a single active processor that not only controls the data defining means and the data converting means but also receives feedback information and controls the operation of each motor to provide coordinate relative movement between the tool and the workpiece along each of the multiple axes.

Turning to Hyatt, we find that Hyatt's processor 12 shown in Figure 1 does not receive feedback information and control the operation of each motor to provide coordinate relative movement between the tool and the workpiece along each of the multiple axes. We note that the servos 20, 21 and 22 shown in Figure 1 and in further detail in Figure 3 perform these functions. Furthermore, we find that the Hyatt servos are active processors as used by Appellant in claim 1.

Therefore, we find that Hyatt fails to disclose a single active processor as recited in Appellant's claims. We will thereby not sustain the Examiner's rejection under 35 U.S.C. § 102.

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In regard to the 35 U.S.C. § 103 rejection, the Examiner has failed to set forth a **prima facie** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. In **re Sernaker**, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." **Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.**, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), **cert. denied**, 117 S.Ct. 80 (1996) **citing W. L. Gore & Assocs., Inc. v. Garlock, Inc.**, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), **cert. denied**, 469 U.S. 851 (1984).

On page 2 of the answer, the Examiner refers us to the final action for the grounds of the rejection. In the final action, the Examiner agrees that Daggett fails to teach a single active processor to control the multi-axes machine. The Examiner relies on Hyatt for a teaching of a single active processor.

As we have found above, we fail to find that Hyatt teaches a single active processor that not only controls the data

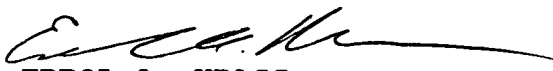


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defining means and the data converting means but also receives feedback information and controls the operation of each motor to provide coordinate relative movement between the tool and the workpiece along each of the multiple axes as recited in Appellant's claims. Furthermore, we fail to find any suggestion in Hyatt or Daggett to provide a single active processor to perform these functions. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

We have not sustained the rejection of claims 1 through 3, 18 and 19 under 35 U.S.C. §§ 102 or 103. Accordingly, the Examiner's decision is reversed.

**REVERSED**

  
ERROL A. KRASS  
Administrative Patent Judge )

  
LEE E. BARRETT  
Administrative Patent Judge )

  
MICHAEL R. FLEMING  
Administrative Patent Judge )

BOARD OF PATENT  
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